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# Spy photos from space

**L**ast March on television, President Reagan displayed pictures of a military buildup in Soviet-backed countries in the Caribbean and Central

America. Though very detailed, the spy-plane photos were poorer than those the U.S. was capable of—a capability kept secret for security reasons.

Advances in technology have given spy craft powerful eyes. Though information is closely guarded, much can be learned about satellite operations.

By JIM SCHEFTER

The U.S. satellite, code-named White Cloud, crossed the Alabama coast southeastward toward the Caribbean. Trailing like obedient puppies, three small sub-satellites followed at the ends of 10-mile-long tethers.

The spacecraft were equipped with sensitive radars and eavesdropping radio receivers. Their sole mission: surveillance. Now, as the space spies looked down from their 600-mile altitude, they plotted the movement of ships back and forth across the water below. From the data they gathered, one conclusion was inescapable: Soviet cargo vessels, often staging out of Cuban ports, were increasing their runs west toward Grenada and Central America.

A concerned President Reagan agreed to a bold move to make public the growing Soviet activity just beyond our southern doorstep. He ordered a high-flying SR-71 Blackbird reconnaissance aircraft to bring back photographic evidence that he could release to the world.

A few days later, in late March, the President stepped before television cameras to display a few of the photos. The pictures were carefully chosen from among the worst available. "We'd never release our best photos," an Air Force officer said later. "That would let people know how good we are."

Even so, the photos showed a modern electronic intelligence facility in Cuba, complete with a satellite ground station for direct communications with Moscow; Russian-built MiG-21 and MiG-23 aircraft at a Cuban military airfield; a new 10,000-foot runway with massive fuel-storage facilities on the island of Grenada; and Russian cargo ships in a Nicaragua harbor.

Like John Kennedy's release of photos showing Soviet missiles in Cuba 21 years before, Reagan's message was clear: Russian influence in the Caribbean was spreading.

## Peeking under the veil

Whether or not the message provoked the reaction Reagan wanted, it briefly lifted the tight veil of secrecy that surrounded U.S. technological advances in aerial and space surveillance. Just how far have we come in the last two decades?

To find out, PS editors sent me into the misty world of

the intelligence community with questions. We knew that getting answers wouldn't be easy. No one will discuss activities, capabilities, or results for the record. Yet a wealth of information is available in background briefings, technical papers, and interviews with people whose work puts them into close contact with the data returned from spy planes and satellites. In most cases, experts agreed to talk only under the condition that they not be identified in print. But some were less rigid.

"The fact that we conduct overhead surveillance is no secret," said Eugene Iwanciw, an analyst for the Senate Intelligence Committee. "The whole field comes under the heading of National Technical Means of Collection." That's bureaucratese for the full range of land, sea, air, and space surveillance. Each is important. But in the past two decades the most dramatic advances have come in space. Without satellites, the U.S. intelligence services would be virtually blind.

"Satellites go where aircraft can't," Iwanciw told me. That includes most of the world. And because satellite reconnaissance is so good, the use of aircraft is declining. The fabled U-2 spy plane gave way more than a decade ago to the SR-71, which flies above 100,000 feet at top speeds of more than 2,200 mph. Now even that plane takes to the sky only to photograph specific targets in accessible regions.

"The SR-71 has become far less sensitive in the past few years," Iwanciw said. The important spying is done by satellites, and airborne photo reconnaissance is virtually becoming an obsolete art. At least seven major programs give the U.S. its eyes and ears in space:

- Close Look, a high-resolution photographic satellite launched only when needed.
- Big Bird, a massive satellite for routine medium-resolution photography and electronic eavesdropping.
- KH-11, another large satellite used for full-time surveillance, whose digital images are relayed to two ground stations.
- KH-9, an improved version of the KH-11 with higher-resolution imagery, to be first launched in 1984.
- Defense Support Program, a set of three satellites in geostationary Earth orbit to monitor missile and space launches.

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